

REMARKS/ARGUMENTS

The Office Action of February 25, 2005 has been reviewed and carefully considered.

By this Amendment, claims 1, 2, 4, 5, 7, and 8 have been amended. Claims 3, 6 and 9 have been withdrawn and amended. New dependent claim 10 has been added. Applicants reserves the right to pursue the non-elected claims in a divisional application prior to issuance of a patent on the instant application. Claims 1, 2, 4, 5, 7 and 8 are now pending, with claim 1 being the independent claim.

In the Office Action, the Examiner has rejected claim 5 under 35 U.S.C. §112, second paragraph. Claim 5 has been appropriately amended. Withdrawal of the 35 U.S.C. §112, second paragraph rejection is respectfully requested.

Claims 1, 2, 4, 5, and 7 stand rejected under 35 U.S.C. §102(b) as anticipated by U.S. Patent No. 2,238,197 (Watson) and, separately, claims 1, 2, 4, 5, 7 and 8 stand rejected as anticipated by U.S. Patent No. 4, 252,385 (Leitzel). Withdrawal of the rejections is respectfully requested.

The inventive bearing assembly includes a counter-bearing body, which is provided with a bearing flange (11), and a bearing body mounting, which axially flanks the flange (11) and has one of its integral parts - lower bearing body (15) - directly supporting the bottom of the flange (11). The lower bearing body (15) absorbs radial force. (See specification, paragraph 0020) To maintain the desired axial position of the rotatable components, a disk-shaped spring (21) is mounted between the counter-bearing body and the bearing body mounting so that it exerts an axial force sufficient to preload the flange (11) against the bearing body mounting. (See specification, p. 9, line 6). Disk springs are conically formed angular disks which are loaded in the axial direction. Occupying a minimal space and having a minimal deflection, the disk spring is capable of

holding the bearing body mounting and the counter-bearing body of the invention constantly biased towards one another. As is known, a force (F) exerted by a spring is

$$F = -kX$$

where k is constant, and X is spring displacement from equilibrium position.

As a result of its substantially flat configuration, displacement of a disk spring is minimal, which allows it to generate a substantially constant axial force. In the context of the invention, the disk provides numerous advantages including, but not limited to, a wide choice of load deflection characteristics that can be selected independently from various characteristics of the elastomeric body, a space-effective structure, and, as discussed above, exertion of a substantially constant force.

Watson teaches a fork joint including a member (10) which is "a sleeve of cushioning material, such, for example, as soft rubber ring (10)." (Watson, column 2, lines 8-9). As a consequence, the rubber ring (10) of Watson, due to its inherent characteristics, exerts a variable force and has a substantial range of displacement. In contrast, the disk spring as recited in amended claim 1 exerts a substantially constant force and has minimal displacement so as to provide the desired alignment and preloading of the bearing and counter-bearing bodies. Furthermore, Watson teaches a counter-bearing body or flange (2) axially spaced from a bearing body mounting (1). In contrast, amended claim 1 recites that the bottom side of the flange of the counter bearing directly rests on the bearing mounting. This is important because the bearing body absorbs a radial force and "accordingly" has an angular cross-section." (See specification, paragraph 0020). Watson does not disclose or suggest an element that can perform the same function and have the same configuration as the recited counter-bearing, bearing mounting and the disk spring. An important consequence of the structure as recited in amended claim 1 is that

the resiliency of the spring (21) can be selected independently from the dimension of the bearing. In Watson, this is not possible: the softer the ring (10), the lesser preloading of disks (12, 13). Accordingly, Watson neither teaches nor suggests the axially preloaded disk spring nor the bottom side of the counter bearing directly resting on the bearing body and, therefore, Watson does not anticipate claim 1 as amended.

Claims 2, 4, 5, and 7 depend from claim 1 and are not anticipated by Watson either. Since claims 1, 2, 4, 5 and 7 are patentable over Watson, withdrawal of the 35 U.S.C. §102(b) rejection is respectfully requested.

Lietzel teaches a counter-bearing body or flange (14) and a bearing mounting (118) sandwiching an elastomeric sealing washer (34). During relative axial displacement of the flange and mounting, the sealing washer functions so as to dampen an axial thrust in order to minimize an impact upon the body (14) and mounting (118). A further function of the sealing washer (34) is to increase a sealing area between "a metal washer 35 ... and an end face 36 of a boss portion 38." (column 1, lines 67-68). As a consequence, the sealing washer does not exert a substantially constant force upon the sliding bearings and does not preload them against the bearing body. In contrast, the axially preloaded disk spring recited in amended claim 1 must exert a force so as to preload the bearings. The sealing washer (34) of Lietzel includes "an inner, flatly cupped or frustoconical, thick thrust washer portion 40 fitted with an interference fit on the axle 18. An outer, thinner, sealing flange 42 which is somewhat more deeply curved..." (column 2, lines 7-10). Accordingly, the flat sealing washer 34 is neither structurally nor functionally similar to the recited disk spring, which inherently has a conically formed structure.

Accordingly, Lietzel does not have the disk spring as recited in claim 1 and, as a consequence, does not anticipate claim 1 as amended. Claims 2, 4, 5, 7, and 8 depend from


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claim 1 and are not anticipated by Leitzel either. Withdrawal of the 35 U.S.C. §102(b) rejection is respectfully requested.

Based on all of the above, it is respectfully submitted that the present application is now in proper condition for allowance. Prompt and favorable action to this effect and early passing of this application to issue are respectfully solicited.

It is believed that no fees or charges are currently required. However, if any are required at this time in connection with this application, they may be charged to our Patent and Trademark Office Deposit Account No. 03-2412.

Respectfully submitted,
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